

Atty. Dkt. No. 030307/0191

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: KIM SORENSEN et al.  
Title: FOOD-GRADE CLONING VECTOR AND  
THEIR USE IN LACTIC ACID BACTERIA  
Appl. No.: 09/673,617  
Filing Date: January 25, 2001  
Examiner: Unassigned  
Art Unit: Unassigned

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Submitted herewith on Form PTO-1449 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**CONCISE EXPLANATION OF**  
**RELEVANCE OF EACH DOCUMENT**

In order to comply with Applicants' duty of disclosure pursuant to 37 C.F.R. §1.56, submitted herewith on Form PTO-1449 is a listing of documents cited in the International Search Report of Applicants' International Application No. PCT/DK99/00209. A copy of the International Search Report setting forth the portion of each reference considered relevant by the Examiner is attached.

The relevance of Documents A6, A8-A13 and A15-A17 is described in the present specification.

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the filing date of the application.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

Respectfully submitted,

Date January 25, 2001

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Form PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 030307/0191		SERIAL NO. 09/673,617	
<b>INFORMATION DISCLOSURE CITATION</b>  (Use several sheets if necessary)				APPLICANT KIM SORENSEN et al.			
				FILING DATE January 25, 2001		GROUP ART UNIT Unassigned	
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	A1	5,627,072	5/6/97	Leenhouts et al.	435	320.1	
<b>FOREIGN PATENT DOCUMENTS</b>							
	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
	A2	90/00599	1/25/90	WIPO			
	A3	91/09131	6/27/91	WIPO			
	A4	94/16086	7/21/94	WIPO			
	A5	95/10621	4/20/95	WIPO			
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	A6	Paal Skytt Andersen et al., "Sequence Analysis and Identificaion of the pyrKDbF Operon from Lactococcus lactis Including a Novel Gene, pyrK, Involved in Pyrimidine Biosynthesis.", Journal of Bacteriology, pp. 5005-5012, August, 1996					
	A7	Michael R. Cancilla et al., "Lactococcus lactis glyceraldehyde-3-phosphate dehydrogenase gene, gap: further evidence for strongly biased codon usage in glycolytic pathway genes.", Microbiology, vol. 141, pp. 1027-1036, 1995					
	A8	M. Demerec et al., "A Proposal For A Uniform Nomenclature In Bacterial Genetics.", Genetics, vol. 54, pp. 61-76, July, 1966					
	A9	Francoise Dickely et al., "Isolation of Lactococcus lactis nonsense suppressors and construction of a food-grade cloning vector.", Molecular Microbiology, vol. 15, No. 5, pp. 839-847, 1995					
	A10	Gudmundur Eggertsson et al., "Transfer Ribonucleic Acid-Mediated Suppression of Termination Codons in Escherichia coli.", Microbiological Reviews, pp. 354-374, September, 1988					
	A11	Michael J. Gasson, "Plasmid Complements of Streptococcus lactis NCDO 712 and Other Lactic Streptococci After Protoplast-Induced Curing.", Journal of Bacteriology, vol. 154, No. 1, pp. 1-9, April, 1983					
	A12	Helge Holo et al., "High-Frequency Transformation, by Electroporation, of Lactococcus lactis subsp. cremoris Grown with Glycine in Osmotically Stabilized Media.", Applied and Environmental Microbiology, vol. 55, No. 12, pp. 3119-3123, December, 1989					
	A13	E. Johansen et al., "Nonsense Suppression in Lactococcus lactis: Construction of a <<Food-Grade>> Cloning Vector.", Developments in Biological Standardization, vol. 85, pp. 531-534, 1995, XP-002085666					
	A14	Oscar P. Kuipers et al., "Characterization of the nisin gene cluster nisABTCIPR of Lactococcus lactis Requirement of expression of the nisA and nisl genes for development of immunity.", European Journal of Biochemistry, vol. 216, pp. 281-291, August, 1993, XP-002041580					
	A15	Eric. Johansen et al., "Characterization of Leuconostoc Isolates from Commercial Mixed Strain Mesophilic Starter Cultures.", J. Dairy Sci. vol. 75, pp. 1186-1191, 1992					
	A16	J. Lawrence Marsh et al., "The pIC plasmid and phage vectors with versatile cloning sites for recombinant selection by insertional inactivation.", Gene, vol. 32, pp. 481-485, 1984					
<b>EXAMINER</b>				<b>DATE CONSIDERED</b>			
* <b>EXAMINER:</b> Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.							

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<b>INFORMATION DISCLOSURE CITATION</b>  (Use several sheets if necessary)				APPLICANT KIM SORENSEN et al.			
				FILING DATE January 24, 2001		GROUP ART UNIT Unassigned	
<b>OTHER DOCUMENTS</b> (Including Author, Title, Date, Pertinent Pages, Etc.)							
	A17	Morten L. Pedersen et al., "Genetic analysis of the minimal replicon of the Lactococcus lactis subsp. Lactis biovar diacetylactis citrate plasmid.", Mol. Gen. Genet., vol. 244, pp. 374-382, 1994					
	A18	Henry V. Huang et al., "Improved Suppressor tRNA Cloning Vectors and Plasmid-Phage Recombination.", Vectors (A Survey of Molecular Cloning Vectors and Their Uses), Chapter 14, pp. 269-283					
	A19	Kim I. Sorensen et al., "A Food-Grade Cloning system for Industrial Strains of Lactococcus lactis.", Applied and Environmental Microbiology, vol. 66, No. 4, pp. 1253-1258, April, 2000					
EXAMINER				DATE CONSIDERED			
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